

Application No. 09/711,567 (Div. of 09/209,706)  
Attorney's Docket No. 031221-058

### **REMARKS**

Claims 84-92 are pending in the application. Claim 84 has been amended to correct a typographical error. Claim 85 was amended to clarify the polymerization conditions. Claim 90 was amended to correct a typographical error and clarify the polymerization conditions. Support for the amendments to claims 85 and 90 may be found at least on page 4, line 26, page 7, line 16 and page 14, line 28. No new matter was added.

Claims 84, 85 and 87-89 were rejected under 35 U.S.C. § 102(b) as being anticipated by Suzuki et al., U.S. Patent No. 5,137,785. Applicants respectfully traverse this rejection.

Claim 84 is directed to a manufactured article produced by a method for bonding a first substrate surface to a second substrate surface. The method comprises providing a catalyst at the first substrate surface, providing a metathesizable material between the first substrate surface and the second substrate surface or providing a metathesizable material as a component of the second substrate; and contacting the catalyst on the first substrate surface with the metathesizable material under normal ambient conditions so that the metathesizable material undergoes a metathesis reaction and bonds the first substrate surface to the second substrate surface.

Claim 85 is directed to a manufactured article that includes a first substrate surface, a second substrate surface and an adhesive layer interposed therebetween, wherein the first substrate surface comprises an elastomeric material and the adhesive layer comprises a metathesis polymer which was polymerized upon contact with a catalyst under normal ambient conditions. Claims 87-89 depend directly or indirectly on claim 85.

Suzuki et al. describes a composite material composed of a substrate and a surface layer wherein the substrate is a ring-opened polymer of a norbornene-type monomer having tricyclic or higher cyclic structure and the surface layer is a polymer sheet of an olefin polymer or a thermoplastic hydrocarbon elastomer. The polymer sheet tenaciously adheres to the substrate without any extraneous adhesive or means to a degree that tearing takes place in the substrate when an attempt is made to separate the polymer sheet from the substrate. *Column 2, lines 9-18.*

A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. *MPEP § 2131.* Suzuki et al. does not contain each and every feature of the invention as defined in the rejected claims. For example, the article described by Suzuki et al. is directed to a composite material wherein the substrate and plastic layer have good adhesion in the absence of any adhesive. In addition, the composite is made by placing the elastomer layer in a mold and then reaction injecting norbornene monomer and metathesis catalyst in the mold to bulk polymerize the monomer.

As noted, claim 84 is directed to a manufactured article produced by a method. The method entails providing a catalyst on a first substrate surface and contacting it with a metathesizable material to bond the first substrate surface to the second substrate surface. This method results in an adhesive material between the first and second substrate surfaces. Claim 85 is directed to a manufactured article that has an adhesive

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layer interposed between a first substrate surface and a second substrate surface. Thus, these claims are directed to articles with features not found in Suzuki et al.

According to the Office Action, Suzuki discloses a composite including a metathesis polymer that may be located between upper and lower substrates and that in such a case the metathesis polymer forms an adhesive interposed between the substrates. However, a careful reading of the section of Suzuki et al. referred to by the Examiner reveals that the norbornene monomer and metathesis catalyst is reaction injected into a mold to bulk polymerize the monomer even in this example. Bulk polymerization results in a molded article, not a manufactured article as claimed. See, page 7, lines 1-15.

Since Suzuki et al. does not disclose each and every feature of the claims, it does not anticipate the invention as defined by the rejected claims. In view thereof, Applicants respectfully request that this rejection be withdrawn.

Claims 84-92 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Mühlebach et al., U.S. Patent No. 5,973,085, taken with Ofstead, U.S. Patent No. 3,935,179 and Suzuki et al. Applicants respectfully traverse this rejection.

Claims 84 and 85 are independent claims directed to a manufactured article. Claims 86-89 depend directly or indirectly from claim 85. Claim 90 is an independent claim directed to a tire laminate. Claims 91 and 92 depend directly or indirectly from claim 90.

Mühlebach relates to compounds having at least two strained cycloolefins bonded directly or via a bridging group, compositions comprising these compounds and a one-component catalyst for thermally induced and/or radiation-induced metathesis polymerization. *Column 1, lines 5-8*. Mühlebach does not describe or suggest any catalysts which may be used at normal ambient conditions or which will polymerize upon contact. Rather, this patent teaches away from compounds and catalysts which react on contact under normal ambient conditions. See, for example, *column 16, lines 6-12 and column 50, lines 42-50*.

Ofstead relates to a process for the ring-opening polymerization of unsaturated alicyclic hydrocarbons and catalyst systems therefore. The polymerization may be carried out in solution or in bulk. *Column 4, lines 60-61*. As noted above, these polymerization methods result in different materials than the manufactured article claimed. The metathesis polymer of the invention forms a filmogenic adhesive rather than a molded article. *Page 7, lines 13-15*.

Suzuki is discussed above, and, as noted, only describes a molded article which is a composite material wherein the substrate and plastic layer have good adhesion in the absence of any adhesive.

None of the cited patents describes the features of the manufactured articles or tire laminate defined in the claims. Mühlebach describes catalysts for thermally induced and/or radiation-induced metathesis polymerization. Ofstead describes polymerization in solution or in bulk, which results in a different product from the manufactured article claimed. Suzuki does not describe any article which includes adhesive. In view of the lack of teachings in these patents of the features of the invention as defined in the

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rejected claims, Applicants respectfully request that the rejection of claims 84-92 be withdrawn.

Claim 84 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Suzuki et al. or Mühlebach et al. taken with Ofstead and Suzuki et al., and further in view of Lesser, U.S. Patent No. 2,978,354. Applicants respectfully traverse this rejection.

Claim 84 is directed to a manufactured article wherein the metathesis reaction takes place under normal ambient conditions. Suzuki et al. does not describe a manufactured article as claimed as discussed above. Mühlebach does not describe metathesis reactions under normal ambient conditions. To the contrary, Mühlebach describes compositions of catalyst and monomer premixed which are storage-stable in the dark. *Column 49, lines 45-46*. These compositions do not react until either heat or radiation is applied. Ofstead describes bulk or solution polymerization, resulting in a product different from the manufactured product claimed.

None of these patents describe or suggest the manufactured product of claim 84. Moreover, the combination of Lesser with these patents does not provide any teaching or suggestion that obviates the lack of teachings in the primary patents cited. Lesser describes a method of applying a coating by applying a water-soluble catalyst to a substrate and applying uncatalyzed resin over the coating of catalyst to rapidly cure the resin. The method of Lesser combined with the other patents would not result in the claimed invention since there is no motivation to modify Suzuki et al., Mühlebach or Ofstead with the method described in Lesser. None of these patents, taken either alone or in combination, would have led one of skill in the art to the manufactured article of claim 84. In view thereof, Applicants respectfully request that the rejection of claim 84 be withdrawn.

Further and favorable action in the form of a Notice of Allowance is believed to be next in order, and such action is earnestly solicited. If there are any questions concerning this paper or the application in general, the Examiner is invited to telephone the undersigned.

Respectfully submitted,

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**Attachment to Amendment**

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84. (Twice Amended) A manufactured article produced by a method for bonding a first substrate surface to a second substrate surface comprising

- (a) providing a catalyst at the first substrate surface;
- (b) providing a [methathesizable] metathesizable material between the first substrate surface and the second substrate surface or providing a [methathesizable] metathesizable material as a component of the second substrate; and
- (c) contacting the catalyst on the first substrate surface with the [methathesizable] metathesizable material under normal ambient conditions so that the [methathesizable] metathesizable material undergoes a metathesis reaction and bonds the first substrate surface to the second substrate surface.

85. (Amended) A manufactured article that includes a first substrate surface, a second substrate surface and an adhesive layer interposed therebetween, wherein the first substrate surface comprises an elastomeric material and the adhesive layer comprises a metathesis polymer which was polymerized upon contact with a catalyst under normal ambient conditions.

90. (Amended) A tire laminate comprising a tire carcass [have] having an outer periphery surface, a tire tread having a bonding surface, and a metathesis polymer adhesive layer between the outer periphery surface of the tire carcass and the bonding surface of the tire tread, wherein the metathesis polymer adhesive layer was formed by polymerization upon contact with a catalyst under normal ambient conditions.